



iBook G4 12" 1.33 GHz Logic Board Replacement

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INTRODUCTION

This guide will show you how to replace the brain of your iBook.

TOOLS:

- 4mm Nut Driver (1)
- Anti-Static Wrist Strap (1)
- Coin (1)
- Phillips #00 Screwdriver (1)
- Flathead 3/32" or 2.5 mm Screwdriver (1)
- Spudger (1)
- T8 Torx Screwdriver (1)

PARTS:

- iBook G4 12" 1.33 GHz Logic Board (1)

Step 1 — Battery



- Lay your iBook upside down on a flat surface.
- Use a coin to rotate the battery locking screw 90 degrees clockwise.
- Lift the battery out of the computer.

Step 2 — Keyboard



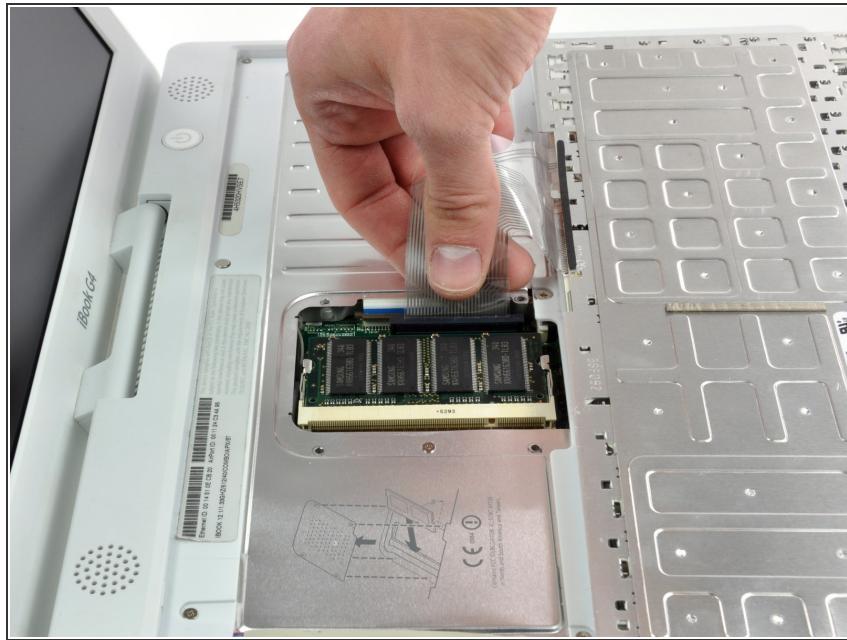
- Pull the keyboard release tabs toward you and lift up on the keyboard until it pops free.
- If the keyboard does not come free, use a small flathead screwdriver to turn the keyboard locking screw 180 degrees in either direction and try again.
- Flip the keyboard over, away from the screen, and rest it face-down on the trackpad area.

Step 3



- Remove the four silver Phillips screws that secure the RAM shield.

Step 4



- Pull the keyboard cable up from the logic board, holding the cable as close to the connector as possible.
- Make sure that you reconnect the keyboard cable before replacing the RAM shield.

Step 5 — Lower Case



- Use a spudger or small flathead screwdriver to remove the three rubber feet from the lower case.

Step 6



- Remove the three newly-revealed Phillips screws.

Step 7



- Use a spudger or small flathead screwdriver to pry up the three metal rings that housed the rubber bumpers.

Step 8



- Remove the three hex screws using a T8 Torx screwdriver.

- ☒ The shorter screw is in the center of the computer.

Step 9



- Remove the two 4.5 mm Phillips screws on either sides of the battery contacts.

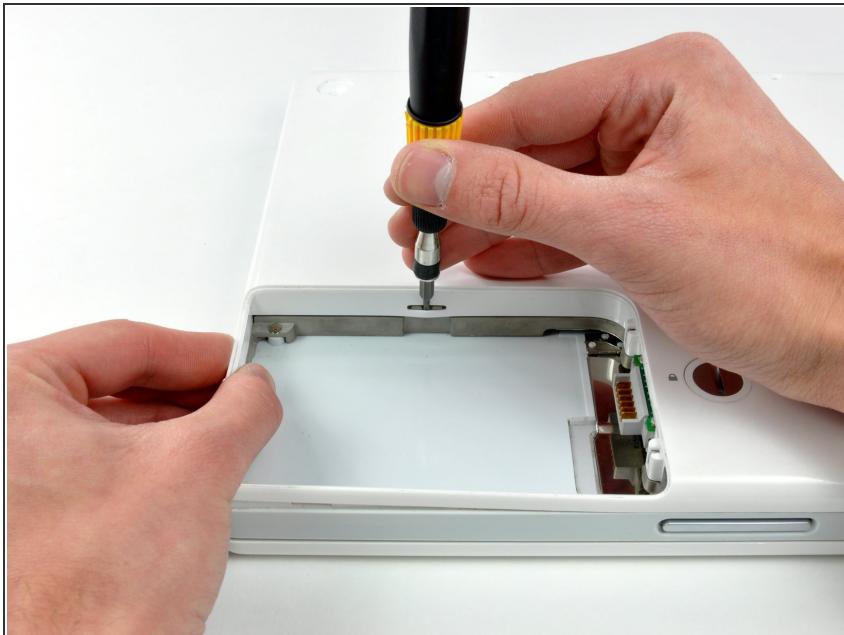
Step 10



i Breathe deeply. Trying times are ahead, but we promise the lower case does come off.

- Push the thin rims of the lower case surrounding the battery compartment in, bending them past the tabs, and then lift up to free that corner of the lower case.

Step 11



- There is a slot on the wall of the battery compartment that locks the lower case in place. Use a small flathead screwdriver to pry out the slot's lower rim and pull up on the lower case to free the slot from the tabs holding it.

Step 12



- Run a spudger along the seam between the lower case and upper case on the front of the computer to free the tabs locking the lower case. Pull up on the lower case and continue to use the spudger as necessary until you hear three distinct clicks.

Step 13



- Continue to run the spudger around the front right corner. There are two tabs on the port side of the computer, one near the front corner and one near the sound-out port.

Step 14



- There are three tabs over the optical drive that must be released before the lower case can come off. Slide the spudger into the lower case above the optical drive and run it toward the back of the computer until you hear three distinct clicks.

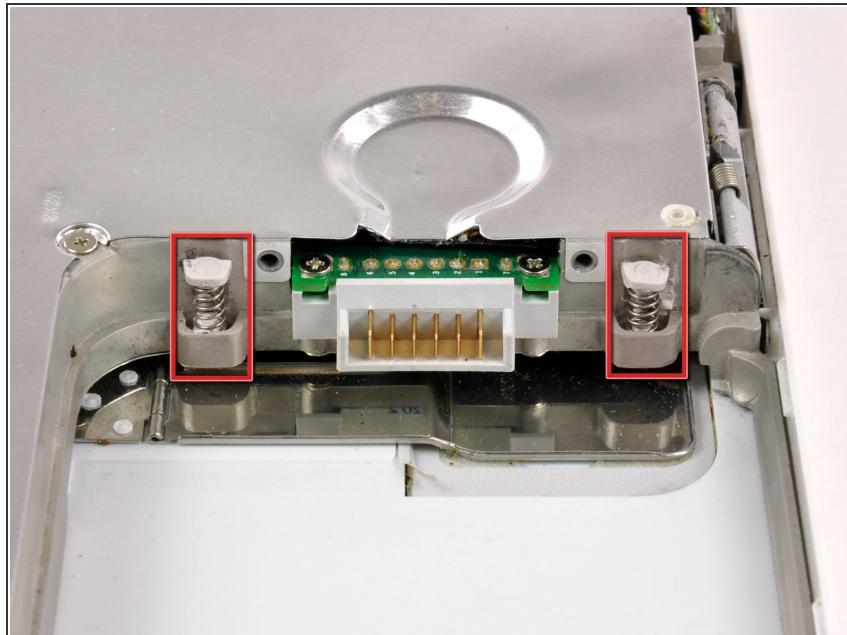
Step 15



(i) The front and sides of the lower case are now free.

- Turn the computer so that the back is facing you and pull the lower case up and toward you until the back tabs pop free.
- ▣ It may be helpful to jiggle the case up and down.

Step 16



- Remove the small greasy springs with white plastic caps from either side of the battery contacts.

Step 17



- Have patience and follow the directions, the end result is up to you. In my case it worked. But I was a Technician TRW Automotive. and worked on Air Bag modules that was returned from customer's that needed them analyzed. I just retired after 26 years.

Step 18 — Bottom Shield



- Remove the following 4 screws from the bottom shield:
 - Two 3 mm Phillips.
 - Two 7.5 mm Phillips.

Step 19



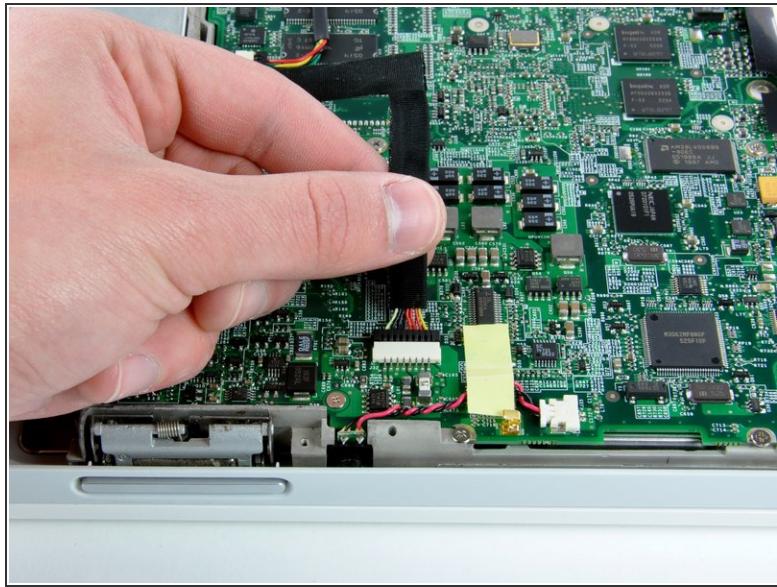
- Lift the bottom shield off.

Step 20 — DC-In Board



- Remove the two Phillips screws securing the DC-In board, removing tape as necessary.

Step 21



- Deroute the cable from around the optical drive, removing tape as necessary.
- Disconnect the DC-In cable from the logic board and angle the DC-In board out of its compartment.

Step 22 — Upper Case



- Remove the two 3 mm Phillips screws inside the left edge of the battery tray.
- Three 3 mm Phillips around the battery compartment.
- Three 4.5 mm Phillips along the optical drive bezel. (a magnetic screwdriver may help to lift these screws out)
- One 12 mm Phillips in the lower right corner.

Step 23



- Four 14.5 mm Phillips.

i We recommend placing the computer on a soft cloth from this point on to prevent damaging the logic board.

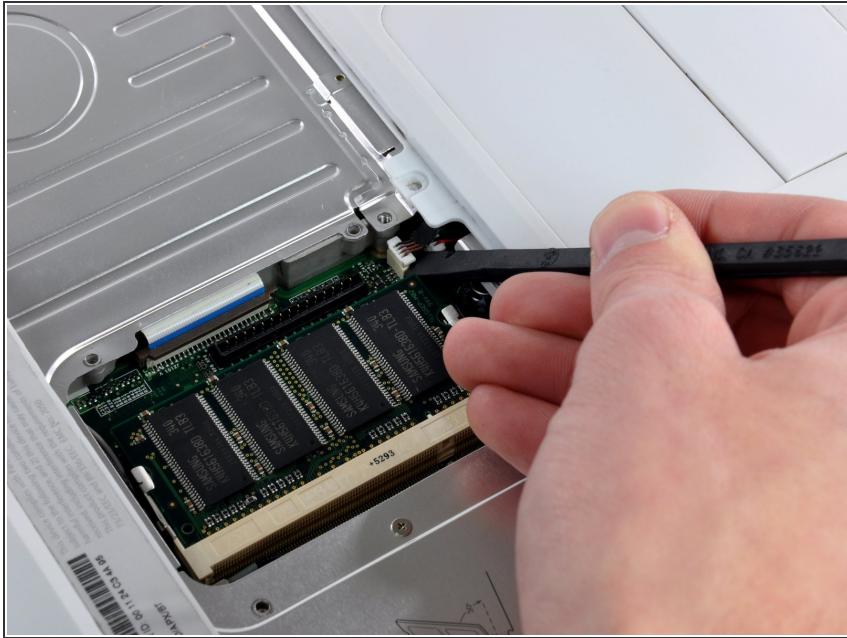
- Turn over the computer and open it.
 - Use the flat side of a flathead screwdriver to remove the small magnet covering a screw near the middle of the computer.
- ↗** The shorter screw goes in the lower left corner.

Step 24



- Remove the following 7 screws from the edges of the keyboard area.
 - Three 2 mm Phillips along the right edge.
 - One 4.5 mm Phillips underneath where the magnet was.
 - One 6 mm Phillips with a small head in the lower left corner.
- Two 6 mm Phillips with large heads, one in the upper left corner and one in the middle.

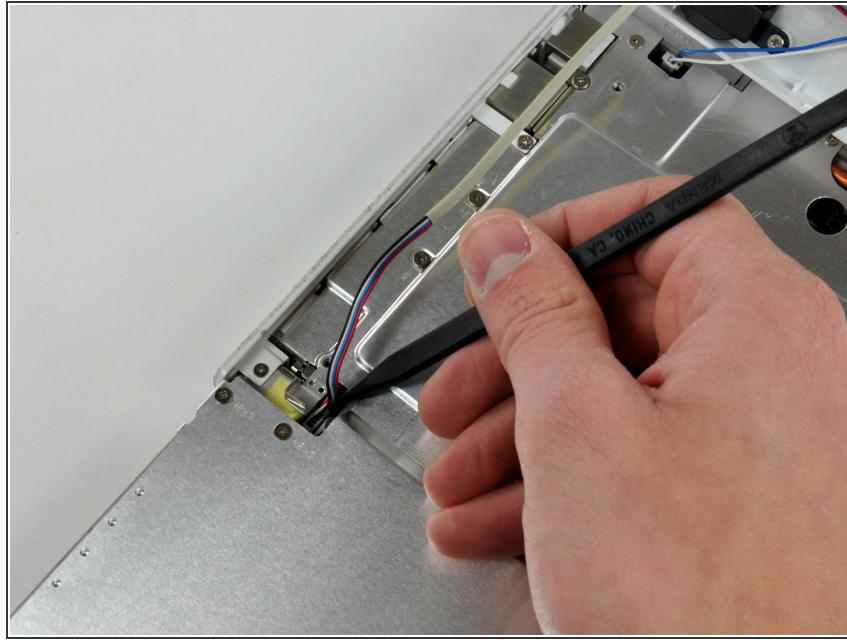
Step 25



ⓘ Before you can yank the upper case off, you must disconnect the trackpad connector, the blue and white power cable, and speaker cable as described in the next steps. Be especially careful with these cables; never pull directly on the cables, but use a spudger to pry up the connector directly.

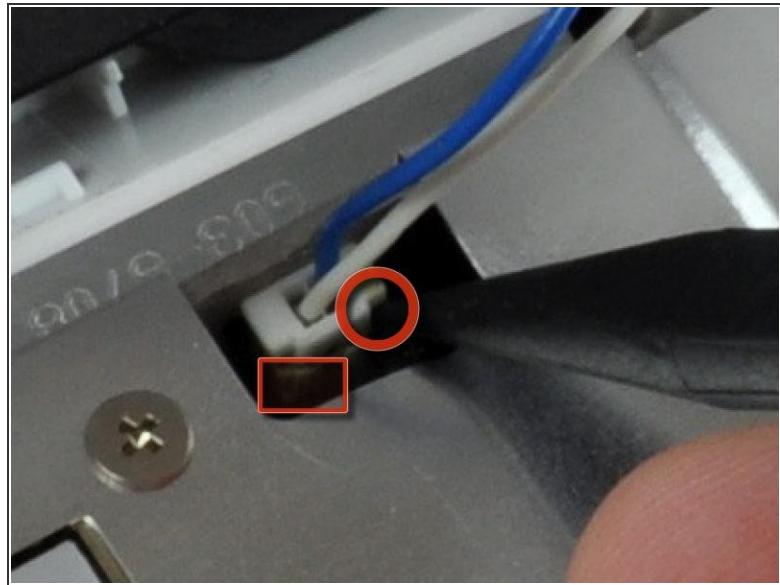
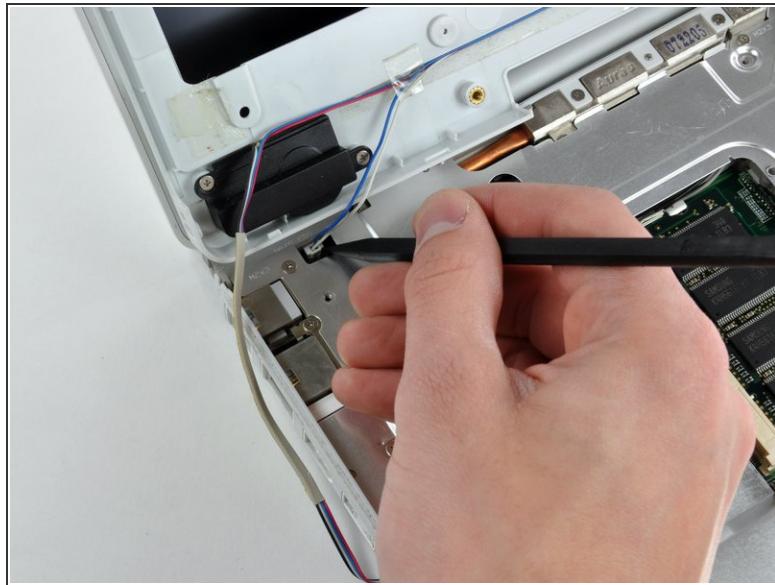
- Carefully lift the upper case slightly and move it toward the front of the computer to reveal the trackpad connector. Use a spudger or your finger to disconnect the trackpad connector hidden beneath the white plastic tab.
- After disconnecting the track pad connector, carefully rotate the upper case away from you and rest it against the display.

Step 26



- i** The connectors at the ends of the following cables are attached very firmly to the sockets on the logic board. Pulling directly on the cable will either separate the cable from its connector or the socket from the logic board.
- Use the sharp end of a spudger to disconnect the speaker cable connector.

Step 27

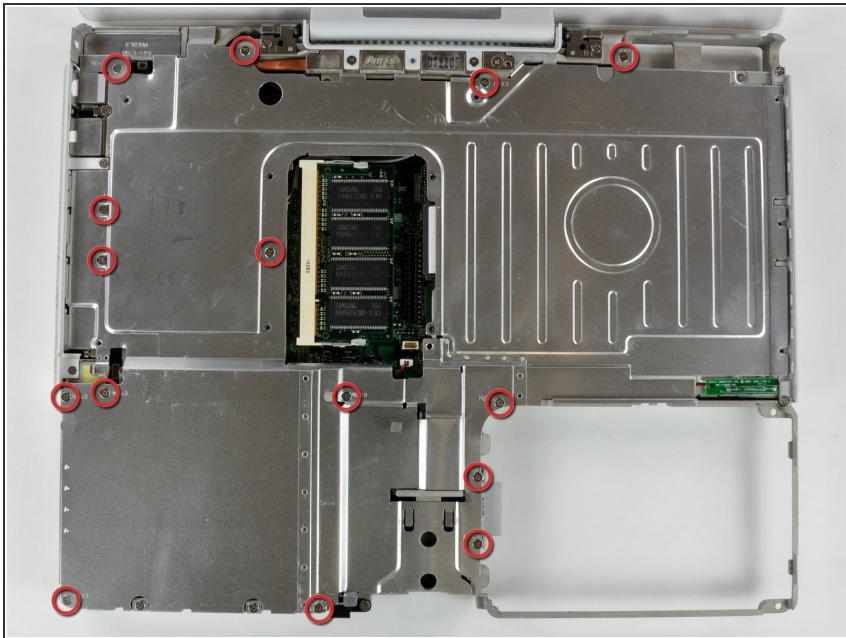


- Using the sharp end of a spudger, disconnect the connector for the blue and white power cables. Again, be careful to pry up only on the connector.

⚠ It is very easy to break the connector from the board, so be careful.

- ⓘ** The key is to apply force in two directions, down to keep the surface board connections intact, up to release the connector.
- The upper case is now free and can be removed from the computer.

Step 28 — Top Shield



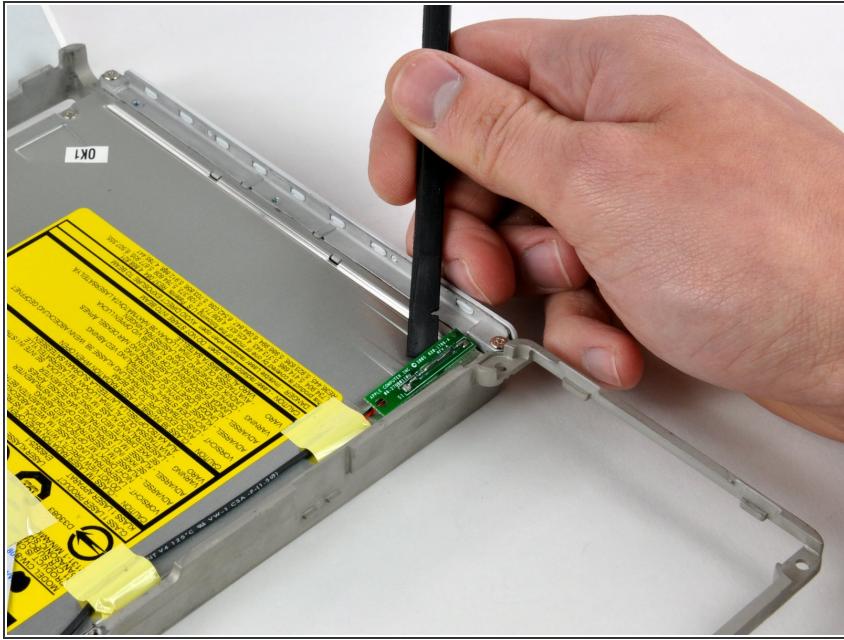
- Remove the fifteen 3 mm Phillips screws securing the top shield to the computer.
 - Remove the following 16 screws:
 - Thirteen 3 mm Phillips.
 - One 3 mm Phillips. (actual screw not present in image)
 - Two 4 mm Phillips.
-  Be sure to fit the screw near the left hinge through the loop in the display data cable, securing the cable to the upper case.

Step 29



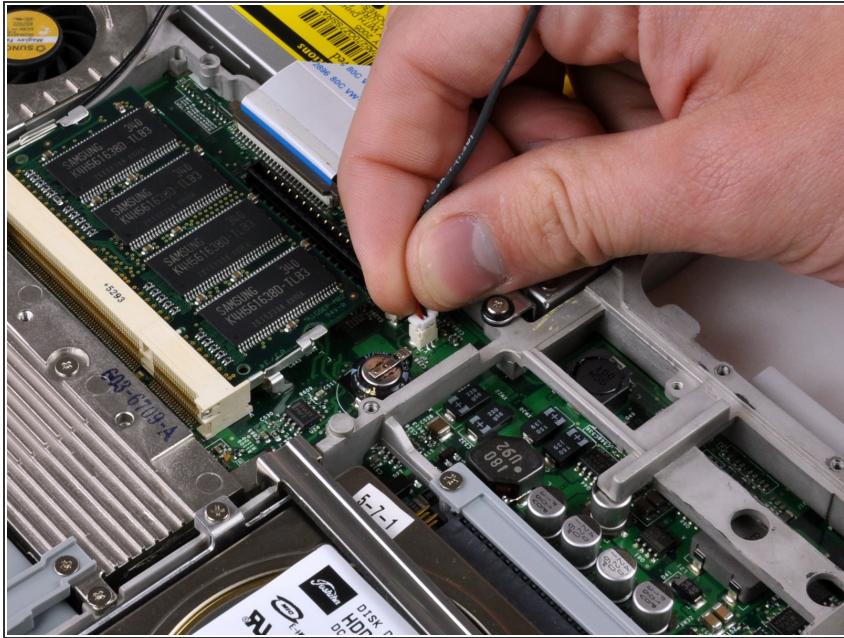
- Lift the top shield up from the right side, minding the upper left corner, which may catch on the metal framework.

Step 30 — Reed Switch Board



- Use a spudger to pry up the Reed Switch Board from the optical drive, removing tape as necessary.

Step 31



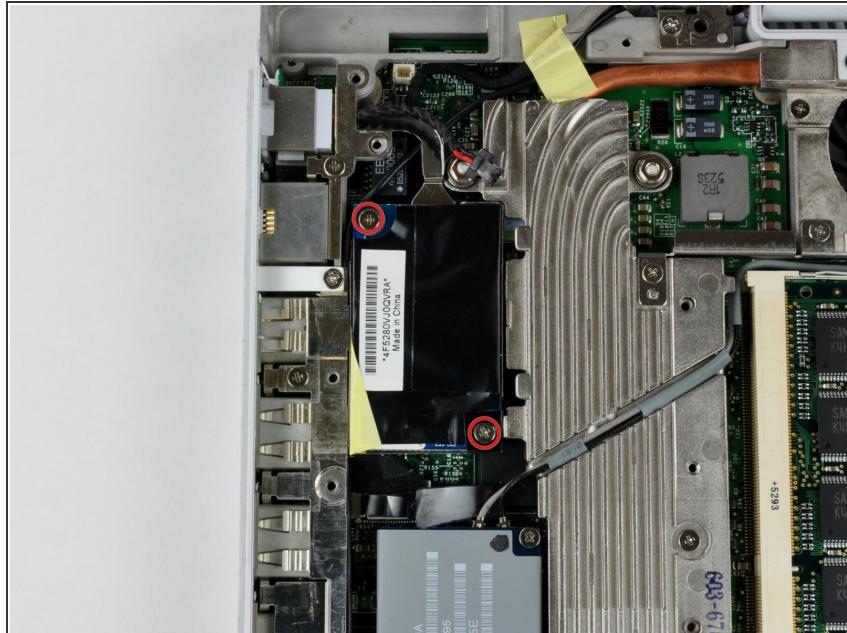
- Use your fingers to disconnect the Reed Switch Board connector from the logic board.

Step 32 — Modem



- Disconnect the RJ-11 cable from the top of the modem.

Step 33



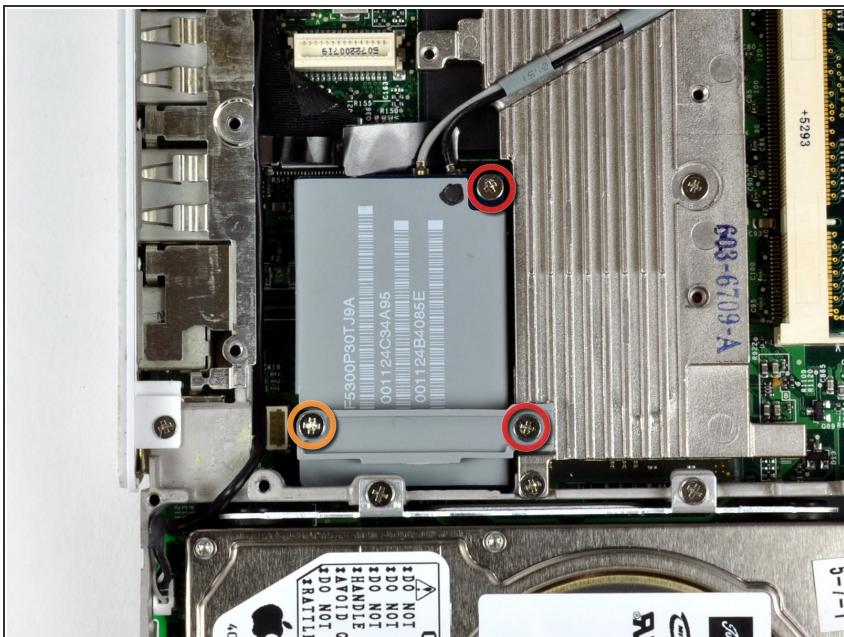
- Remove the two Phillips screws at the corners of the modem.

Step 34



- Lift the modem and modem shield from the bottom.
- ☒ When replacing the modem, seat the shield first, and then connect the modem and press it firmly into the shield, making sure that it is connected to the logic board.

Step 35 — Heat Sink



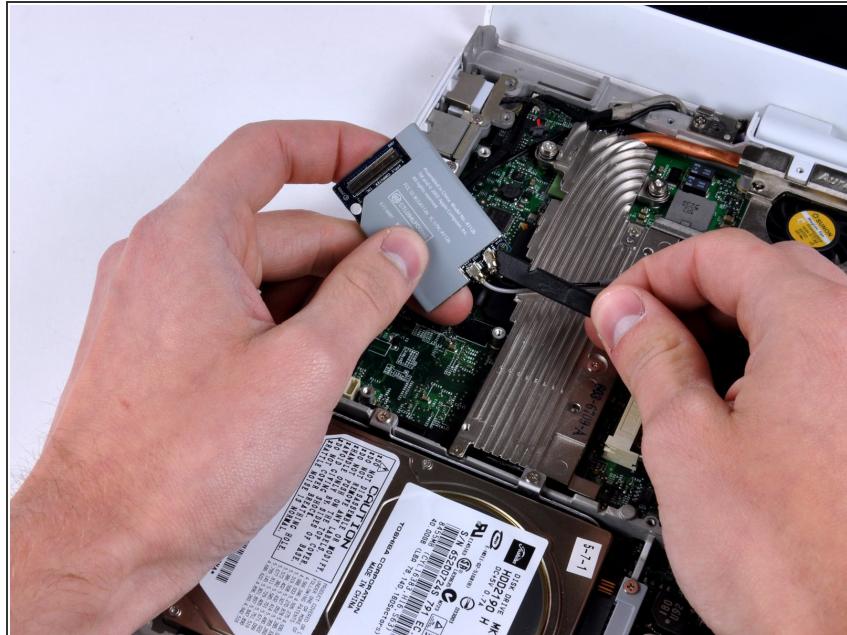
- Remove the following three screws:
 - Two 3mm Phillips screws.
 - One 7.5 mm Phillips screw.
- Lift the small plastic retaining bracket up and out of the computer.

Step 36



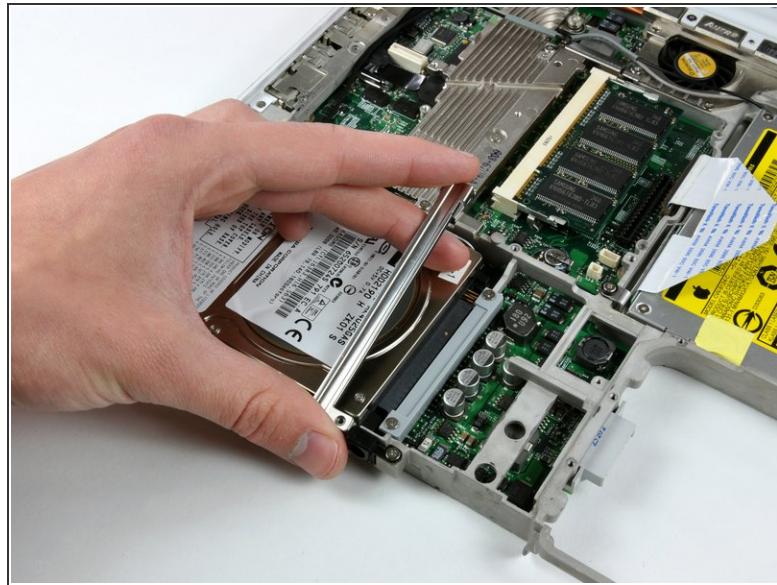
- Using a spudger, pry up the AirPort/Bluetooth board from the end closest to the hard drive. Be sure to pry against the metal framework, as shown in the picture.

Step 37



- Hold the AirPort/Bluetooth board in one hand and use a spudger to disconnect the two antenna cables.

Step 38



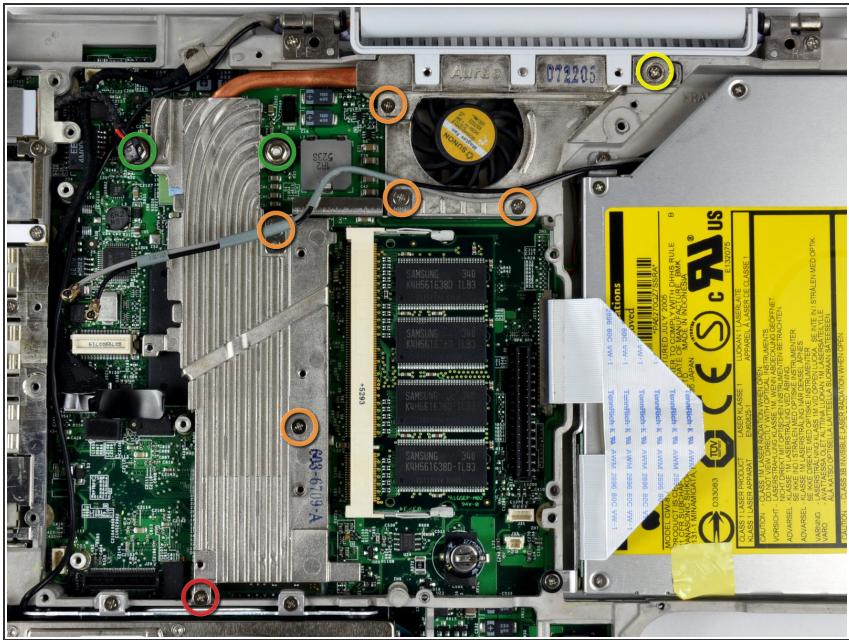
- Lift the AirPort antenna cables off the heat sink and set them aside.
- Lift the metal restraining bracket from the hard drive and place it aside.

Step 39



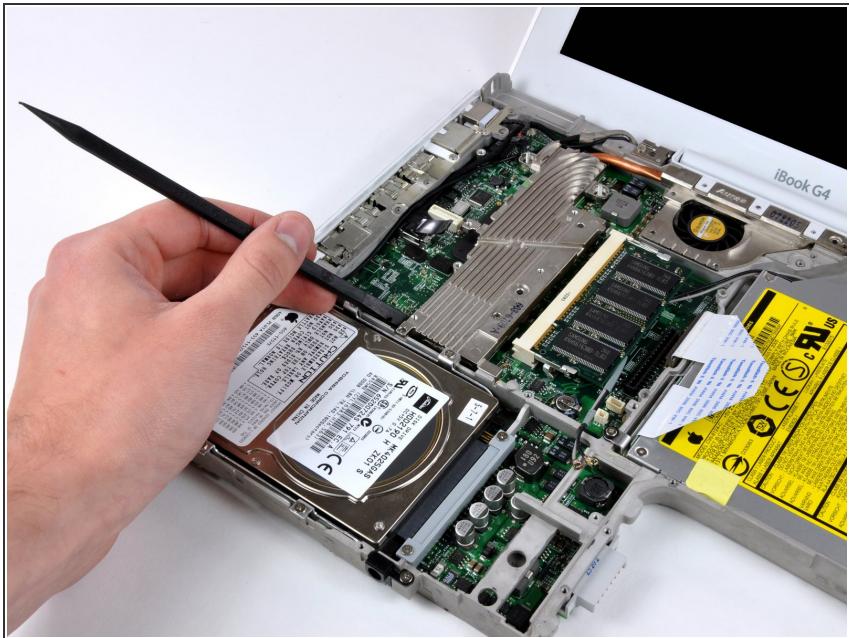
- Remove the two Phillips screws from the white plastic fingers of the hinge grill.

Step 40



- Remove the following 7 screws and 2 nuts from the heat sink:
 - One 3.5 mm Phillips from the lower left corner of the heat sink.
 - Five 6 mm Phillips from around the fan and at the center of the heat sink.
 - One 7.5 mm Phillips at the top right corner of the heat sink.
 - Two 4 mm screw nuts with attached springs from either side of the heat sink.

Step 41



(i) It may be necessary to soften the thermal paste between the logic board and heat sink. You can soften the thermal compound using a hairdryer. Move the hairdryer back and forth over the ribbed metal section of the heat sink for one minute. At this point, the heat sink should come free easily.

- Use a spudger to pry the heat sink up on the left side, near the hard drive.

Step 42



- Grasp the heat sink in one hand and lift up the hinge grill in the other hand so that you can remove the heat sink from the computer.

- ⓘ If you need to mount the heat sink back into the laptop, we have a [thermal paste guide](#) that makes replacing the thermal compound easy.

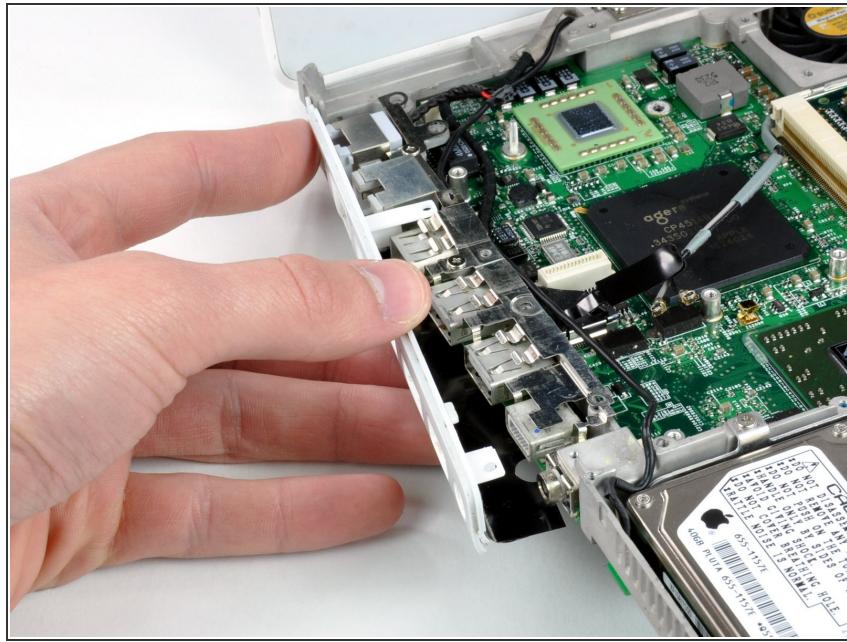
Step 43 — Logic Board



- Remove the two Phillips screws securing the white plastic fingers of the I/O bezel to the metal framework.

- ⓘ The longer screw goes into the longer finger, closer to the display.

Step 44



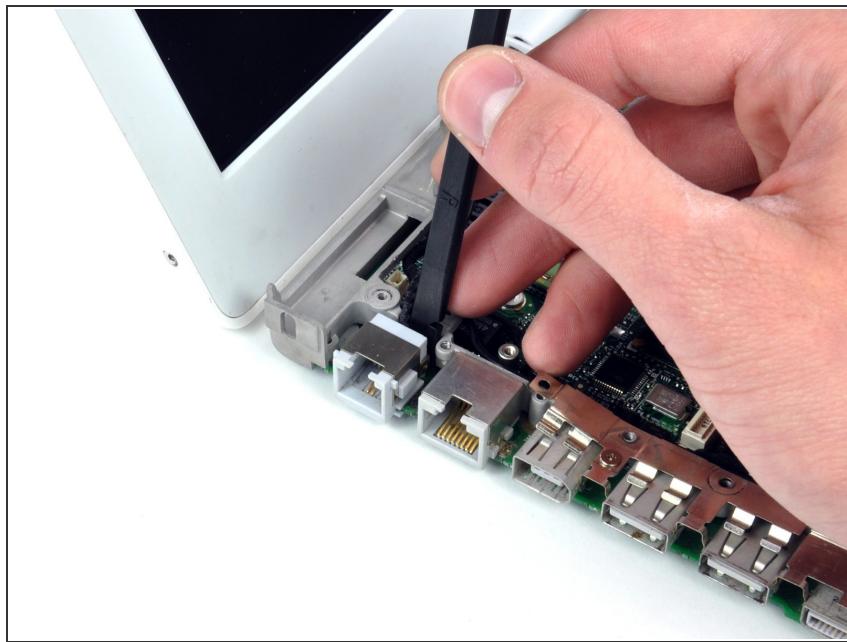
- Lift up the left side of the computer and slide the I/O bezel away.

Step 45



- Remove the single Phillips screw securing the EMI finger to the metal framework.
 - ➡ The screw goes into the hole between the modem and ethernet ports.
- Lift the silver EMI finger off of the metal framework.

Step 46



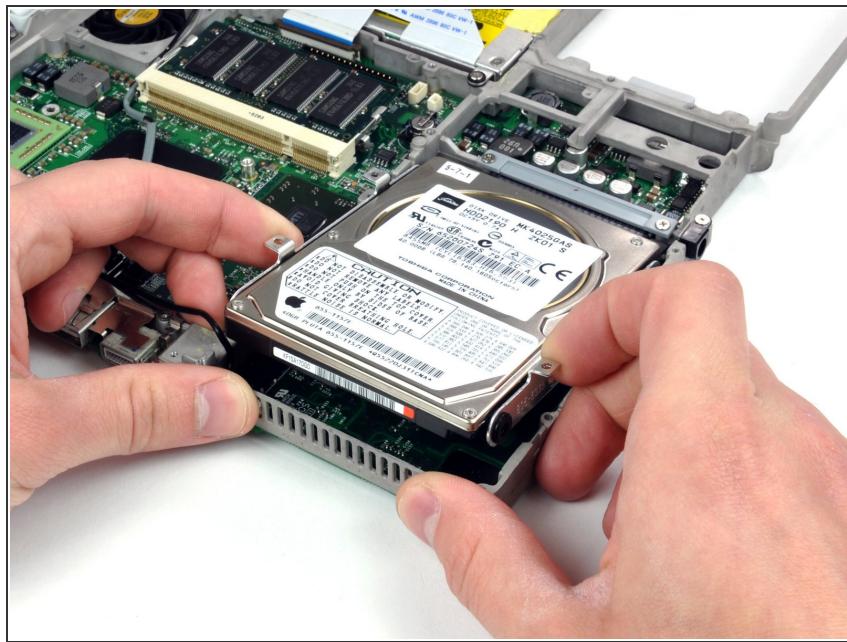
- Wedge a spudger between the RJ-11 board and the metal framework and slide the RJ-11 board down and off of the logic board.

Step 47



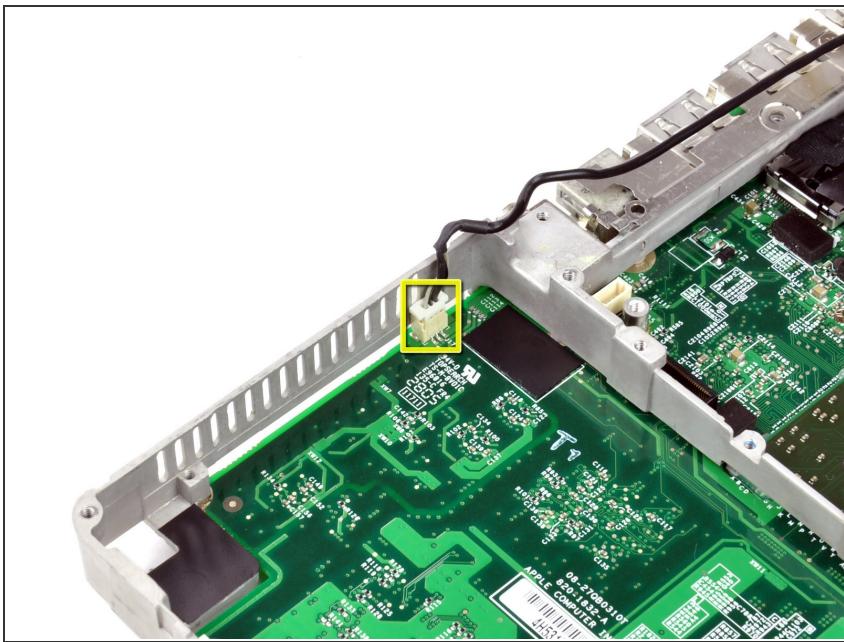
- Remove the four Phillips screws securing the hard drive to the metal framework.

Step 48



- Slightly lift the hard drive from the free end and pull the hard drive straight away from the connector.

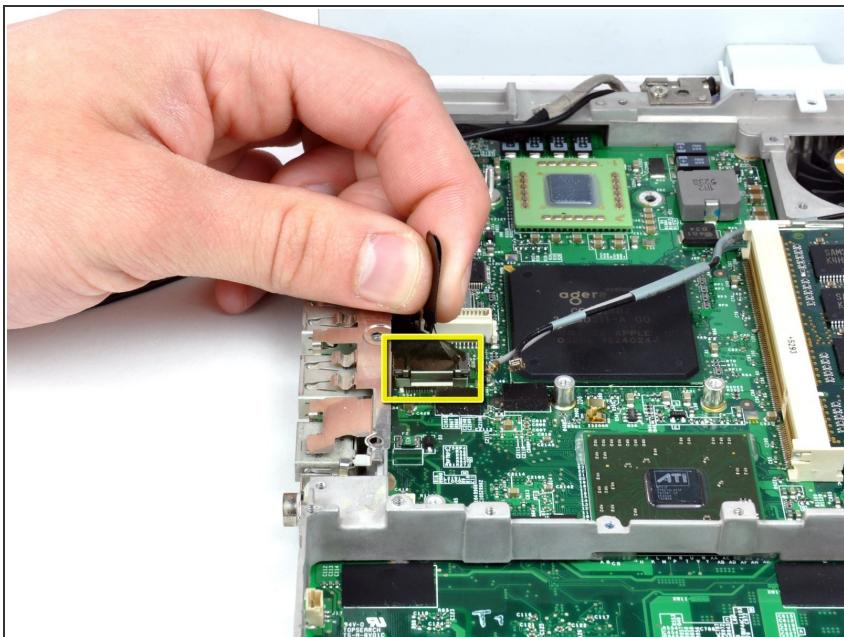
Step 49



⚠ The cable you're about to remove is very fragile - do not pull directly on the wires. Instead, try to pry up the connector directly, using a spudger or a small flathead screwdriver if necessary.

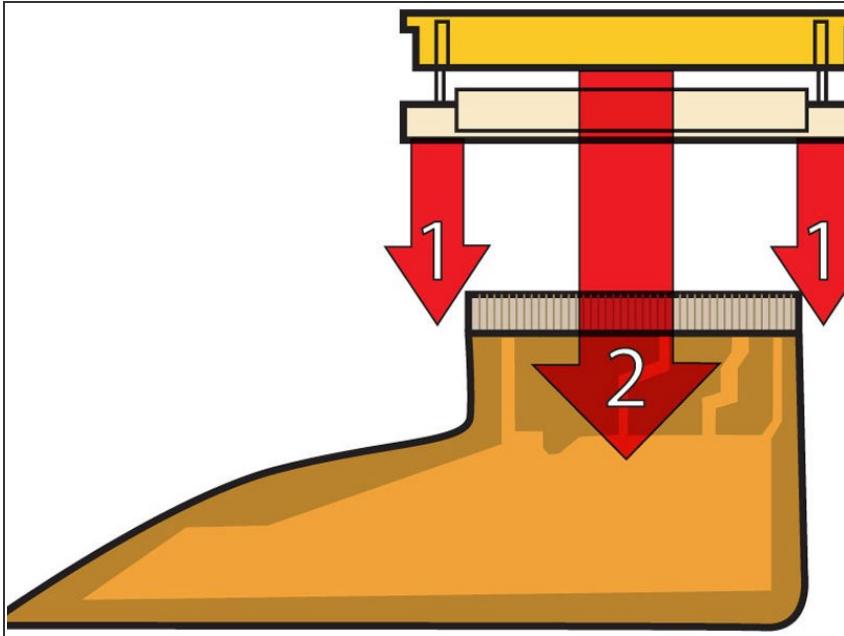
- Disconnect the microphone cable at the front of the computer, between the left side of the hard drive and the metal framework.

Step 50



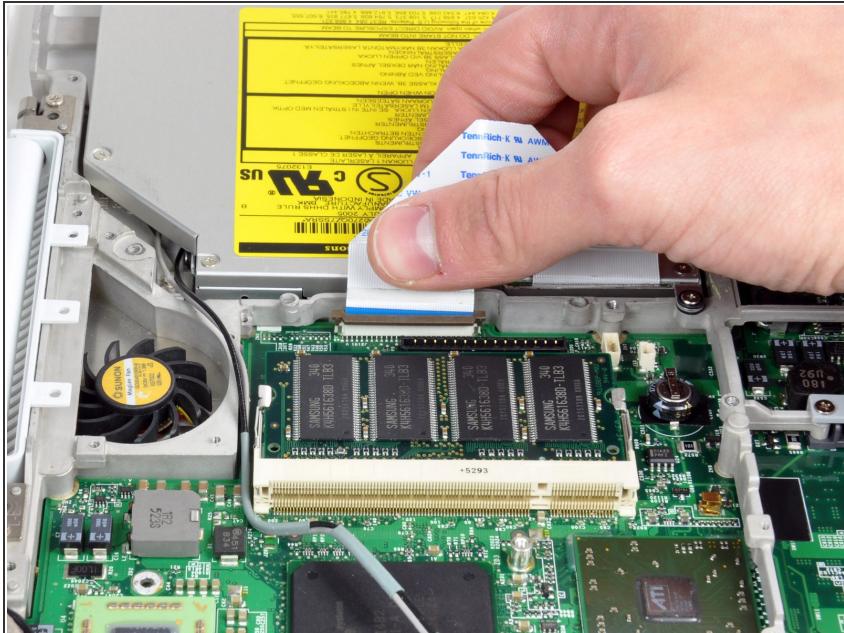
- Use the black plastic handle to disconnect the display data cable from the logic board.

Step 51



- This is a diagram of the ribbon clamp connector you will disconnect in the next step.
- 1) With your fingernails, grasp the locking bar on either side and pull up a small amount (about 1/16" or 2 mm).
- 2) After disengaging the locking bar, slide the cable out of the connector.

Step 52



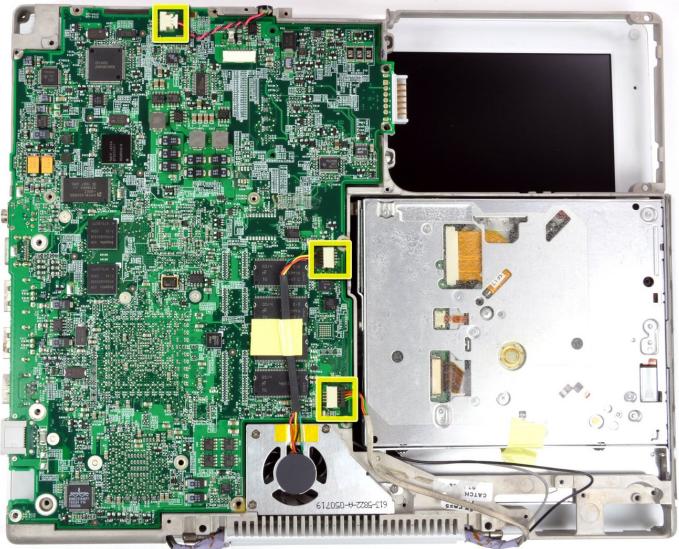
- Release the optical drive ribbon clamp as described above. Slide the optical drive ribbon out of its connector.

Step 53



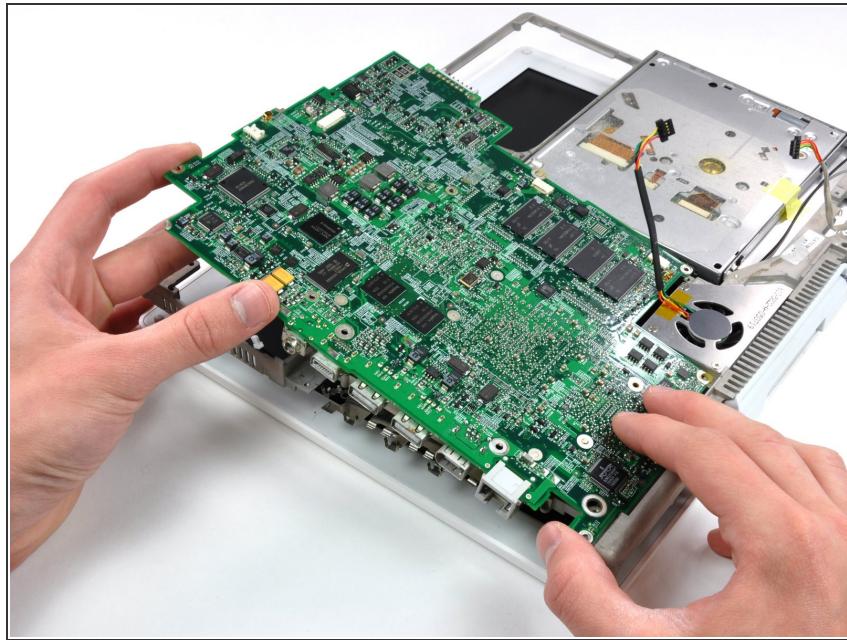
- Close the display and flip the computer over.
- Remove the following 12 screws:
 - Nine 3 mm Phillips.
 - One 3 mm Phillips with a thicker shaft at the bottom right corner of the logic board, next to the fan.
 - Two 7.5 mm Phillips on either side of the battery connector.

Step 54



- Disconnect the inverter, fan, and sleep light cables from the logic board.
- When replacing the logic board, make sure that the inverter cable is not pinned under the logic board.

Step 55



- Lift the logic board carefully from the computer.
- ☒ Mind the thin metal EMI fingers surrounding the ports when replacing the logic board.

To reassemble your device, follow these instructions in reverse order.